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**IN THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1 1. (currently amended) A method of analyzing a plurality of network elements  
2 configured to support at least one established communication path in a network, the  
3 method characteristics comprising the steps of:

4 querying a network element in a communication the network for local network  
5 information;

6 receiving the local network information from the network element in response to  
7 querying, the local network information comprising one or more items selected from the  
8 group including topology information, connection information, and performance  
9 information;

10 analyzing the local network information received to map [[a]] an established  
11 communication path established in the network;

12 responsive to the local network information received and the established  
13 communication path mapped in the analyzing step, selecting a next network element of  
14 the established communication path for querying; and

15 if the next network element has been selected, iterating the method from the  
16 querying step for the next network element.

1 2. (original) The method as defined in claim 1 further comprising the step of  
2 receiving a notification signal from one or more network elements, the notification signal  
3 indicative of a network event, and wherein the step of querying is initiated in response to  
4 receiving said notification signal.

1 3. (original) The method as defined in claim 1 further comprising the step of  
2 determining network capacity using communication path data from the analyzing step.

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1 4. (original) The method as defined in claim 1 further comprising the step of  
2 determining network performance using the communication path data from the analyzing  
3 step.

1 5. (original) The method as defined in claim 1 further comprising the step of  
2 detecting network faults using communication path data from the analyzing step.

1 6. (original) The method as defined in claim 1 wherein the topology information  
2 includes a routing table and wherein the connection information includes a connection  
3 table.

1 7. (cancelled)

1 8. (cancelled)

1 9. (cancelled)

1 10. (cancelled)

1 11. (cancelled)

1 12. (cancelled)

1 13. (currently amended) A method for analyzing a plurality of network elements  
2 configured to support at least one established communication path of a network, the  
3 method characteristics comprising the steps of:

4 receiving a notification signal from a network element, said notification signal  
5 indicative of a new established communication path set up by the network element in the  
6 network, [[and]] said notification signal including circuit identifier information;  
7 querying [[a]] the network element in a communication the network for  
8 connection information;

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9 receiving the connection information from the network element in response to  
10 querying;

11 comparing the connection information with the circuit identifier information to  
12 determine a match condition; and

13 if the match condition occurs in the comparing step:[[,]]

14 querying the network element for routing information;

15 receiving the routing information from the network element;

16 analyzing the routing information received to map the new established  
17 communication path established in the network;

18 selecting a next network element to query along the new established  
19 communication path; and

20 if the next network element has been selected, fetching from the received  
21 circuit identifier information circuit identifier information associated with the next  
22 network element and iterating the method from the step of querying for the next  
23 network element.

1 14. (currently amended) The method as defined in claim 1 further comprising:  
2 including the step of  
3 storing communication path data of the established communication path  
4 established through the communication in the network.

1 15. (cancelled)

1 16. (currently amended) The method as defined in claim 13 further comprising:  
2 including the step of  
3 storing communication path data of the established communication path  
4 established through the communication in the network.

1 17. (previously presented) Apparatus for analyzing network characteristics in a  
2 network including a plurality of network elements interconnected together to form a  
3 communication network and configured to support at least one established

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4 communication path in the communication network, the apparatus comprising:

5       means for querying a network element in the communication network for local  
6 network information, the local network information comprising one or more items  
7 selected from the group including topology information, connection information, and  
8 performance information;

9       means, responsive to receipt of the local network information, for analyzing the  
10 local network information received to map [[a]] an established communication path  
11 established in of the network; and

12       means, responsive to the local network information received and the established  
13 communication path mapped in the analyzing means, for selecting a next network  
14 element of the established communication path for querying;

15       wherein the means for querying is responsive to a notification that the next  
16 network element has been selected.

1 18. (original) The apparatus as defined in claim 17 wherein the querying means  
2 further comprises means for receiving a notification signal from one or more network  
3 elements, the notification signal indicative of a network event, and wherein the querying  
4 means is responsive to receiving said notification signal.

1 19. (currently amended) The apparatus as defined in claim 17 further comprising  
2 means for determining network capacity using communication path data of the  
3 established communication path from the analyzing means.

1 20. (currently amended) The apparatus as defined in claim 17 further comprising  
2 means for determining network performance using communication path data of the  
3 established communication path from the analyzing means.

1 21. (currently amended) The apparatus as defined in claim 17 further comprising  
2 means for detecting network faults using communication path data of the established  
3 communication path from the analyzing means.

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- 1 22. (original) The apparatus as defined in claim 17 wherein the topology
- 2 information includes a routing table and wherein the connection information includes a
- 3 connection table.